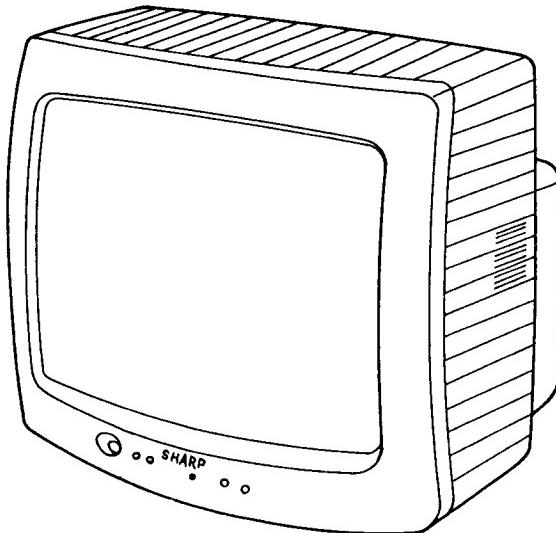


SHARP SERVICE MANUAL

S35M113G-M60/

**COLOR TELEVISION****Chassis No. SN-50****MODEL****13G-M60**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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INSTALLATION AND SERVICE INSTRUCTIONS

- Note:** (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdriver or TV alignment tools.
 (2) Before performing adjustment, TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

+ 120V DC REGULATOR

ADJUST-MENT

The + 120V DC Adj. control (R706) is adjusted at the factory. However, should readjustment be required, proceed as follows:

1. Actuate the receiver with 120V AC input voltage.
2. Select a local channel.
3. Connect positive lead of Digital Voltmeter to C712(positive side) on PWB-A; negative lead to chassis ground.
4. Adjust R706 to obtain a + 119V DC reading.

CAUTION: The reading should be within + 119V ± 1VDC to ensure normal function and circuitry reliability.

X-RADIATION PROTECTOR CIRCUIT TEST

1. After service has been performed on the horizontal deflection system, high voltage system, or + B system, test the X-Radiation protection circuit to ascertain proper operation as follows:

- 1) Apply 120V AC using a variac transformer for accurate input voltage.
- 2) Allow for warm up and adjust all customer controls for normal picture and sound.
- 3) Check the voltage of test point TP654. (It's voltage should be about 19.7V DC.)
- 4) Apply external 25V DC at TP654 by using an external DC supply. The increased voltage will cause the TV to shut off.
- 5) Turn on the power again. Unplug the AC power cord, wait 5 seconds, and plug the AC power cord in the outlet again.

Next turn on the power and make sure the image is normal on the screen.

- 6) If the TV dose not shut off in step 4, the circuit must be repaired before the set is returned to the customer.
2. When the IC2001 or IC2702 has been replaced, recheck the X-ray protector in the following steps.
- 1) Select a local channel.

- 2) Connect a digital voltmeter to TP654 and make sure that the voltmeter reads $19.7 \pm 1.5V$.
- 3) Enter the service mode and select service adjustment "S32".
- 4) Push the CH-UP or CH-DOWN key on the remote control and make sure the data changes. (SPEC'D33-40)
- 5) Now take the steps 4, 5 and 6 in the X-radiation protector circuit test.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with strong air signal or properly tuned in test signal.
3. Set Service mode on, service No.S19 and Bus data D1(Y-mute on).
4. The voltage should be approximately 23.5kV (at zero beam).
 If a correct reading cannot be obtained, check circuitry for malfunctioning components.
 After the voltage test, make Y-mute off (normal mode).

CONNECTING NOTICE

1. The following connecting cords of this model do not have any symbols which identify the connection points on the PWB.
 In servicing this model, Instead the wires of these cords are color-coded as shown in Table 1.

PARTS CODE	SYMBOL ON PWB	PIN NO./WIRE COLOR				
		1	2	3	4	5
QCNW-1769PEZZ	GC	GREEN	BROWN	WHITE	WHITE	WHITE
QCNW-1768PEZZ	YC	YELLOW	BROWN	WHITE	WHITE	-

Table-1

The F-series SHARP TVS have most of the analog setup adjustments eliminated. Coil and variable resistor adjustments are now performed digitally by using the remote transmitter or set's volume and channel change function buttons.

Note: There are still a few analog adjustments in the F-series such as 120V adjust, focus, master screen voltage and coils in the picture if/detector circuit.

Follow the steps below whenever service adjustment is required. See table "B" to determine if service adjustments are required.

1. Service mode -

Before putting unit into the service mode, check, that customer adjustments are in the normal mode. use the reset function in the video adjust menu to ensure customer controls are in their proper (reset) position.

To enter the service mode -

Momentarily short TP2001 to TP2002 (see figure A).

CAUTION: During the adjustment, keep TP2001 and TP2002 short-circuited. Re aware TP2001 to TP2002, be aware that as these test points are shorted they toggle between service and normal. when successfully entered, the service mode will be displayed as shown in figure "B". The "S" figure (in the left hand bottom corner) stands for service adjustment and the number following "S" is the service adjustment number (see figure "B"). in the right hand bottom corner is the letter " D" which stands for data,followed by a number which is the digital value of the adjustment.

To exit service mode-

Turn off the power or unplug the set.

2. Service number selection

Once in the service mode, press the channel up or channel down button on the remote transmitter or at the set. the "S" number (service adjustment number) will vary in increments of one, from 1 to 25 (table "A"). Select the item you wish to adjust.

3. Data number selection

Press the volume up or down button to adjust the data number in the lower right hand side of the screen.

PWB-A(MAIN)

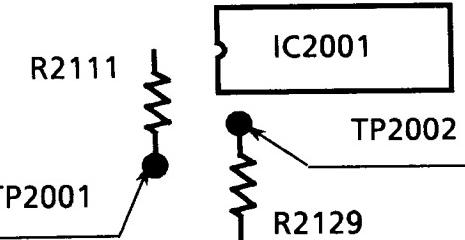


Figure A

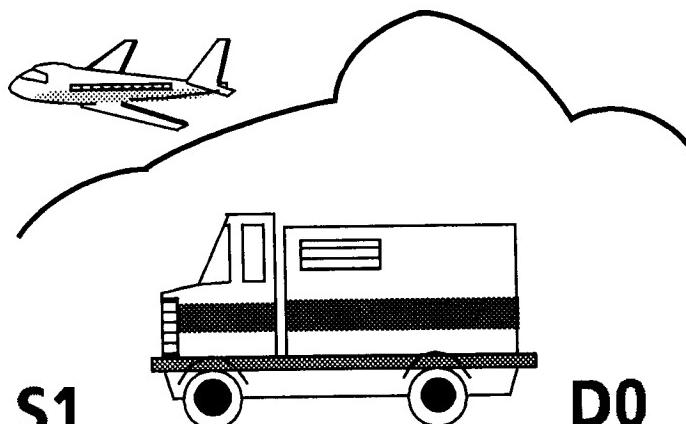


Figure B

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		ADJUSTMENT COMMENTS
		INITIAL VALUE	RANGE	
S1	SUB-PICTURE	85	0-127	
S2	SUB-TINT	70	0-127	
S3	SUB-COLOR	50	0-127	
S4	SUB-BRIGHTNESS	64	0-127	
S5	SHARPNESS	36	0-63	
S6	VERTICAL PHASE	0	0-7	
S7	HORIZONTAL POSITION	18	0-31	Must be set to "0"
S8	RF-AGC	35	0-63	"0" produces a no picture symptom-black raster.
S9	VERTICAL SIZE	32	0-63	
S10	VCO	60	0-127	
S11	R CUT-OFF	0	0-255	
S12	G CUT-OFF	0	0-255	
S13	B CUT-OFF	0	0-255	
S14	G GAIN	127	0-255	
S15	B GAIN	127	0-255	
S16	TRAP(3.58MHz)	0	0-1	"0" = ON, "1" = OFF
*S17	BPF	1	0-1	"0" = Bandpass, "1" = Take off
*S18	BLANKING	0	0-1	"0" = Normal, "1" = NO Blanking "0" = Normal raster, "1" = no "Y" "2" = Test mode, "3" = NO Vertical "0" = x 2 gain, "1" = normal gain
S19	Y-MUTE/VERT,COLLAPSE	0	0-3	
*S20	HORZ.AFC	1	0-1	
S21	WHITE PEAK LIMITER	1	0-1	
*S22	60Hz	0	0-1	"0" = Normal viewing "1" = not available
S25	CAPTION POSITION	23	0-15	
S32	X-RAY PROTECTOR	36	33-40	

*No adjustment is required due to proper setting being made by IC2001 automatically.

Table - A

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		×	Data is stored in IC2702.
IC201	×		The adjustment is needed to compensate for characteristics of parts including IC201.
IC2702	×		Initial setting values are written from IC2001. Adjust for best results.
CRT	×		Adjust items related to picture tube only.

Table - B

■ Service adjustment

VCO Adjustment

1. Connect a digital voltmeter between pin 44 of IC201 and ground.
2. Select a good local channel.
3. Enter the service mode. select adjustment "S10".
4. Adjust the data so that digital voltmeter should read 2.2V.
5. Adjustment is complete, remove the voltmeter, return to "normal" mode.

RF AGC Adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S8".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

NOTE 1 : You will have to come out of the service mode to select another channel.

NOTE 2 : Setting the data to "0" will produce a black raster.

Screen adjustment

1. Connect a digital voltmeter between TP852 and TP853 on the CRT socket PWB.

Note: These test points may not be provided.

Then connect the voltmeter to both ends of R852 located near Q852 on the foil side.

2. Select a good local channel.
3. Enter the service mode and select service adjustment "S3" and set the data value to "0" to set the color level to minimum. You may skip this step if you selected a B/W picture or monoscope pattern.
4. Select service adjustment "S19" and adjust the data value to "1" this turns off the luminance signal (Y-mute).
5. Select service adjustment "S4" and adjust data value to obtain 0.17volts on the digital voltmeter.

6. Adjust the master screen control until raster darkens to the point where raster is barely seen.
7. Adjust service adjustments "S11" red, "S12" green and "S13" blue to obtain a good grey scale with normal whites at low brightness level.
8. Select service adjustment "S19" and reset data to "0" Select service adjustment "S3" and reset data to obtain normal color level.
9. Remove digital voltmeter. reset master screen control to obtain normal brightness range.

White balance adjustment

1. Have unit receive a good local channel.
2. Enter the service mode. select service adjustment "S3" and set to "0" (minimum color). "S3" does not have to be adjusted if you selected a B/W picture or monoscope pattern.
3. Alternately adjust service adjustment data of "S14" and "S15" until a good grey scale with normal whites is obtained.
4. Select service adjustment "S3" and adjust data to obtain normal color level.

Sub-picture adjustment

1. Have unit receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select service adjustment "S1".
4. Adjust the data value to achieve normal contrast range.

Sub-Tint Adjustment

1. Have unit receive a good local channel.
2. Set customer tint control to center of its range.
3. Enter the service mode and select service adjustment "S2".
4. Adjust "S2" data value to obtain normal flesh tones.

Sub-color adjustment

1. Have unit receive a good local channel.
2. Make sure the customer color control is set to center position.
3. Enter the service mode and select service adjustment "S3".
4. Adjust "S3" data value to obtain normal color level.

Sub-brightness adjustment

1. Have unit receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select service adjustment "S4".
4. Adjust "S4" data value to obtain normal brightness level.

Vertical-size adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S9".
3. While observing the top and bottom of the screen, adjust "S9" data value to proper vertical size and linearity.

Vertical phase adjustment

1. Enter the service mode and select service adjustment "S6".
2. Adjust data value to "0".

Note: This must be set "0" when adjust another data retrace line will be appear.

Horizontal position adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S7".
3. Adjust "S7" data value so that picture is centered.

Caption position adjustment (horizontal)

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S25".
3. A black text box appears on the screen (see figure C).
4. Adjust "S25" data value so that text box is positioned in the center of the screen.

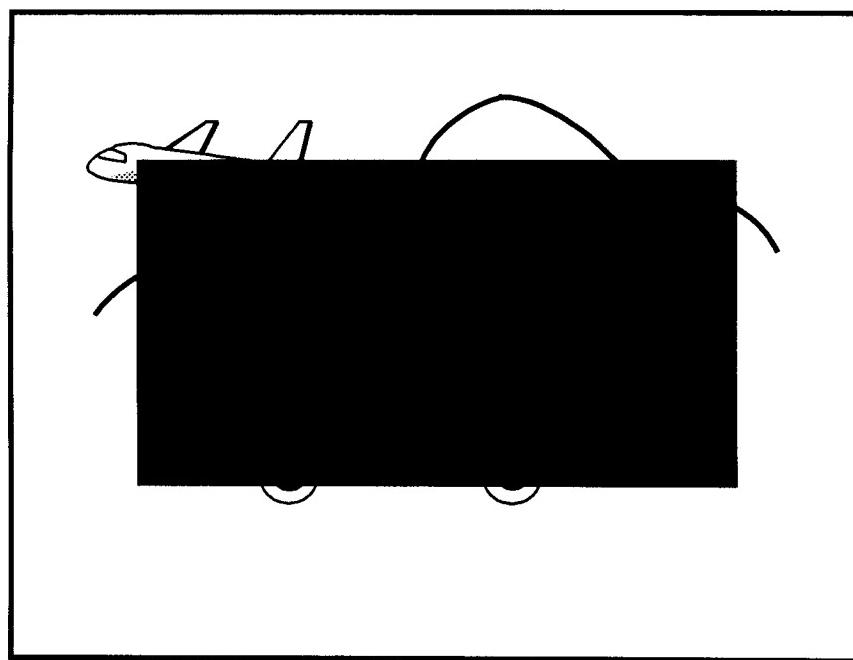


Figure-C.

Horizontal AFC adjustment

1. Have unit receive a good local channel.
2. Enter service mode and select service adjustment "S20".
3. For normal viewing, adjust data value to "1" which is normal AFC gain.
4. If increased horizontal gain is required, adjust data value to "0" for two times normal gain.

Blanking adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S18".
3. This is a two position adjustment, "0" is normal blanking and "1" turns blanking OFF.
4. Adjust data value to "0" for normal viewing.

White peak limiter (wpl) adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S21".
3. This is a two position adjustment, "1" is ON, "0" is OFF.
4. Adjust data value to "1" for normal viewing.

3.58MHz trap adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S16".
3. This is a two position adjustment, "0" is ON, "1" is OFF.
4. Adjust data value to "0" for normal viewing.

Bandpass filter (BPF) adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select service adjustment "S17".
3. This is a two position adjustment, "0" is bandpass, "1" is OFF.
4. Adjust data value to "1" for normal viewing.

Sharpness adjustments

1. Have unit receive a good local channel.
2. Enter the service mode and select "S5" for sharpness.
3. Adjust data value to "36" (center of data range) for sharpness adjustment.

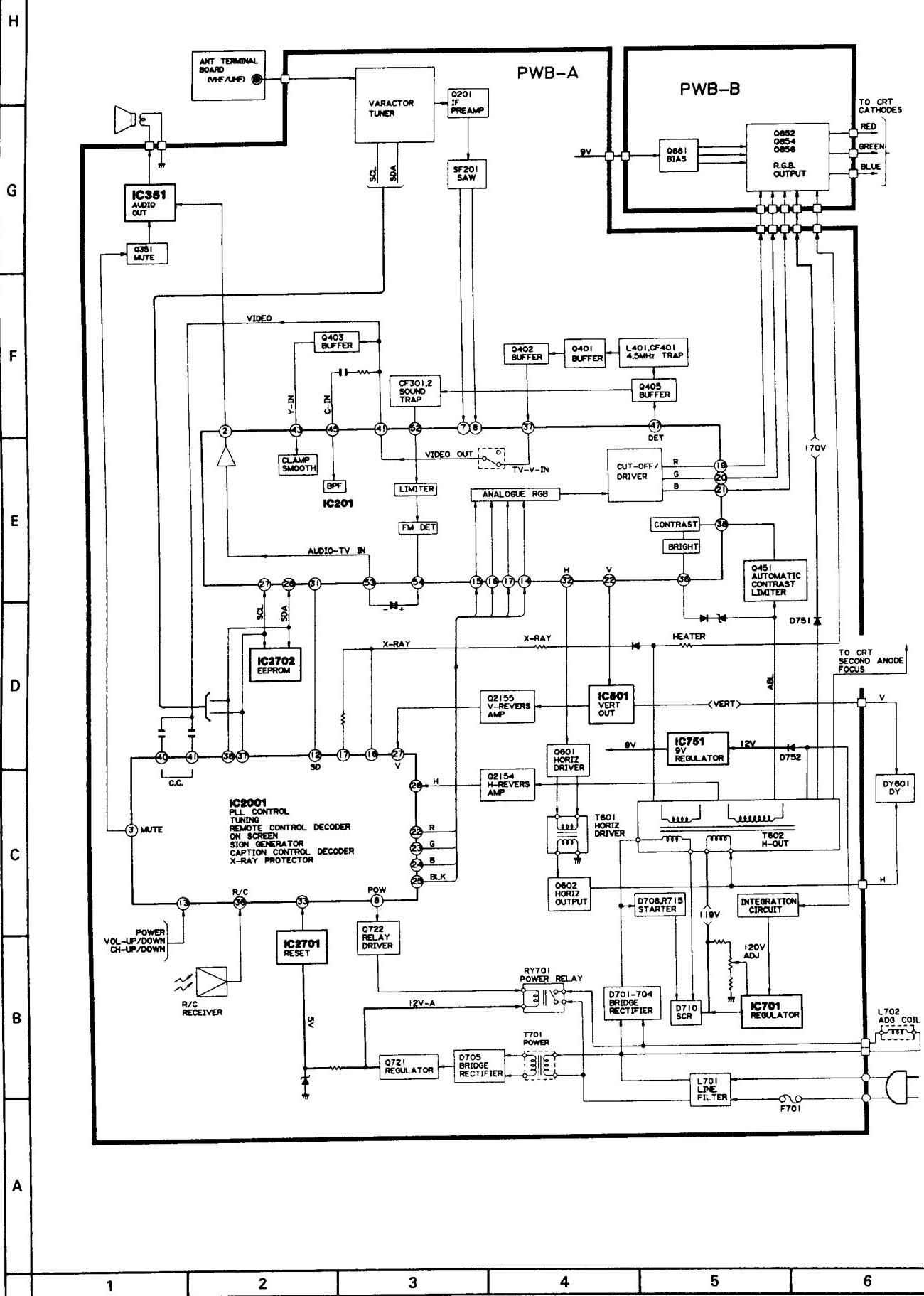
60Hz adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select "S20".
3. The 60Hz adjustment is a two position, "0" is normal viewing. "1" is not used.
4. Adjust data value to "0".

NOTE: If data value is set to "1", you will have a "no sync" condition.

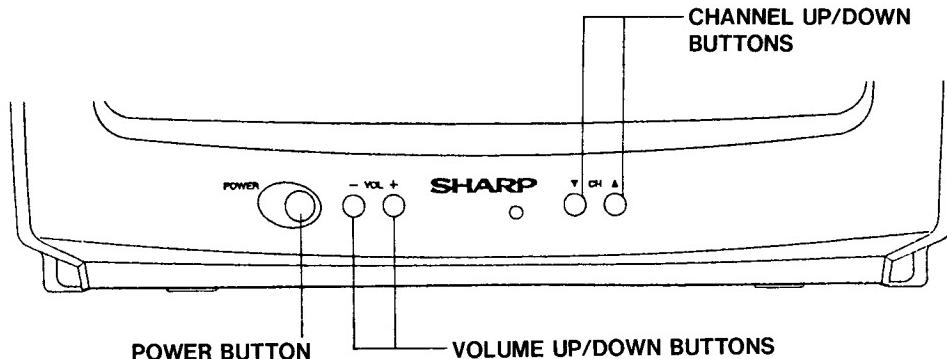
To exit the service mode, turn off power or unplug the set.

BLOCK DIAGRAM

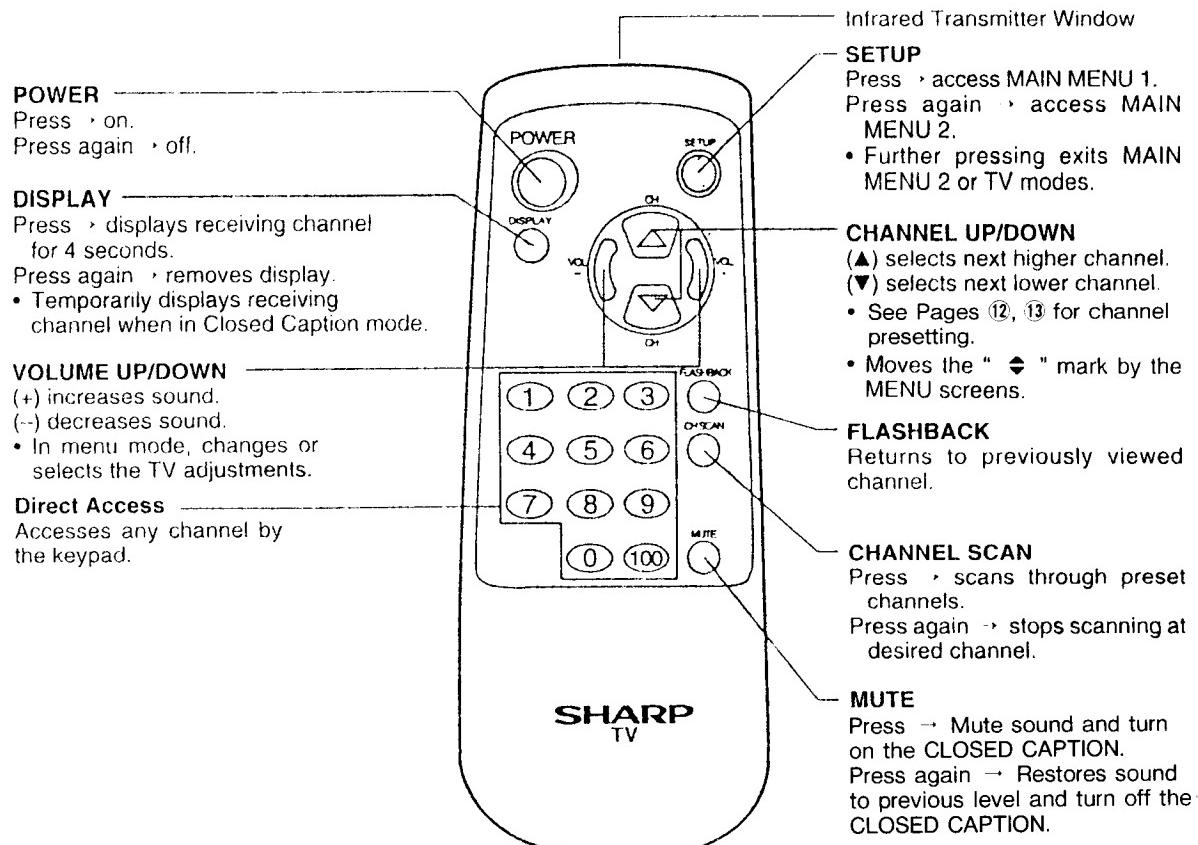


LOCATION OF USER'S CONTROL

FRONT PANEL



BASIC REMOTE CONTROL FUNCTIONS



SCHEMATIC DIAGRAM: CRT

H

G

F

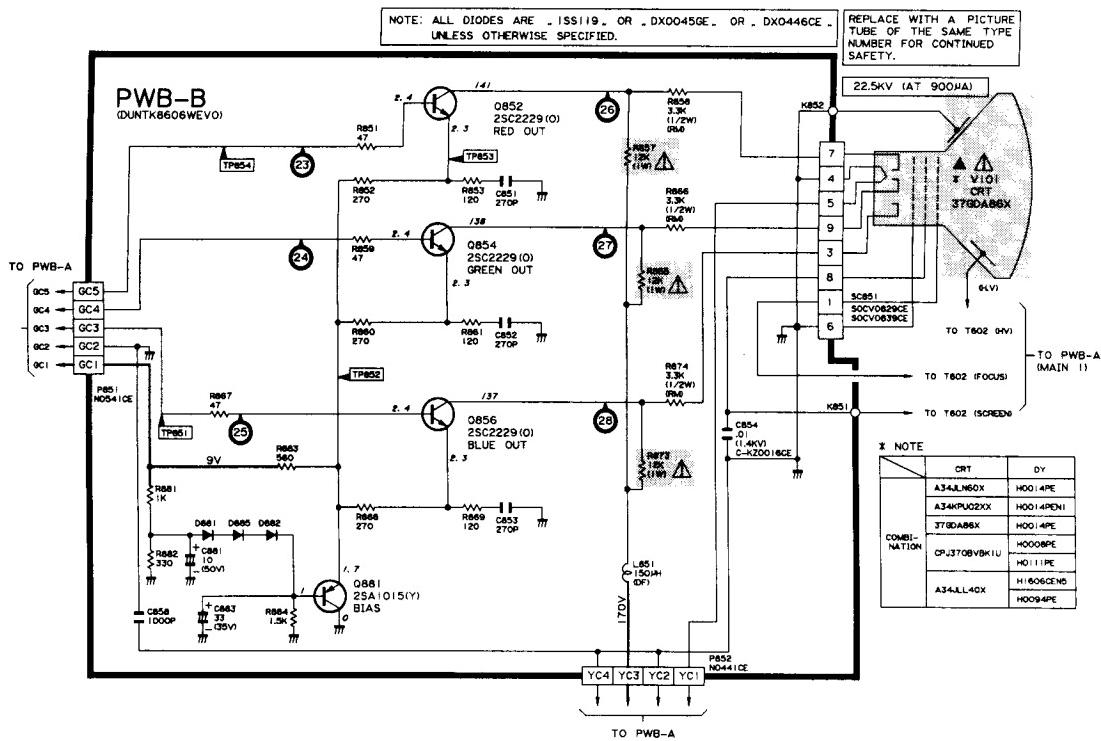
E

D

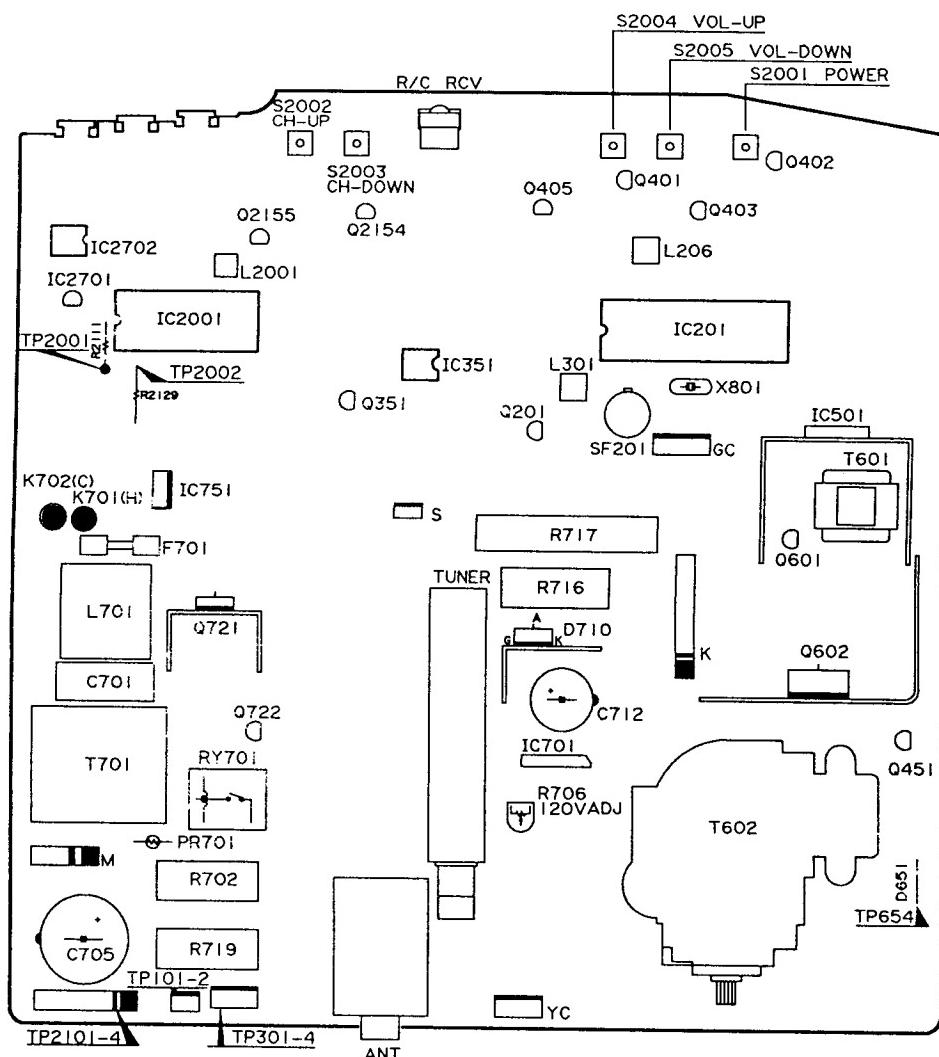
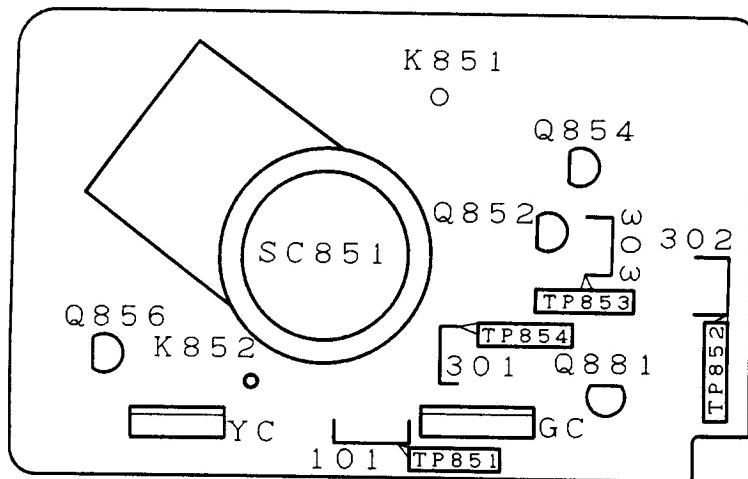
C

B

A



CHASSIS LAYOUT



REPLACEMENT PARTS LIST

SAFETY NOTE — Components marked with a (▲) have special characteristics important to safety. Before replacing any of these components, read carefully the SAFETY NOTICE on page 3 of the Service Manual. Components marked with an (▲) are related to X-Ray Protection circuit.

HOW TO ORDER REPLACEMENT PARTS — To have your order filled promptly and correctly, please furnish the following information:

1. MODEL NO. 2. PART NO. 3. DESCRIPTION

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor, Please call Toll-Free: 1-800-BE-SHARP

★ MARK: SPARE PARTS-DELIVERY SECTION

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*	Description	Code
PICTURE TUBE					PWB-A DUNTK8605WEV0 MAIN UNIT				
					TUNER				
▲△V101	VBA 3 4 JLN 6 0 X - S R	CRT	CB		NOTE:	THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.			
	or	(DY601: H0014PE)			△TU101	VTUVTSH6UZ78/ J	Tuner		BF
	VB 34 KPU 02 X / * S R	CRT							
	or	(DY601: H0014PEN1)							
	VB 370 BVBK1U-S R	CRT							
	or	(DY601: H0008PE or H0111PE)							
	VB 34JLL40X/ * S R	CRT	BX						
	or	(DY601: H0094PE or H1606CEN5)							
	VB 37 GDA 86 X /1E R	CRT							
	(DY601: H0014PE)								
▲△DY601	RC i LH 0 0 1 4 PEZZ R	Deflection Yoke	BH		△IC201	RH-iX2573CEZZ J	I.C.		
	or	(V101: A34JLN60X or 37GDA86X)			IC351	VHiTDA7233/-1 J	TDA7233		AF
	RC i LH 0 0 0 8 PEZZ R	Deflection Yoke	BB		△IC501	RH-iX1011CEZZ J	TA8403K		AG
	or	(V101: CPJ370BVK1U)			△△IC701	RH-iX0137CEZZ J	T2508		AH
	RC i LH 0 0 1 4 PEN1 R	Deflection Yoke			△IC751	VHiKA7809PI-1 J	KIA7809PI		AE
	or	(V101: 34PKPU02XX)							
	RC i LH 0 1 1 1 PEZZ R	Deflection Yoke							
	or	(V101: CPJ370BVK1U)							
	RC i LH 1 6 0 6 CEN5 R	Deflection Yoke	AZ						
	(V101: A34JLL40X)								
	RC i LH 0 0 9 4 PEZZ R	Deflection Yoke							
	(V101: A34JLL40X)								
▲L702	RC i L G 0 3 8 6 PEZZ R	Degaussing Coil	AK		Q201	VS2SC1906//1E J	2SC1906		AC
	PMAGF3 0 0 6 CEZZ J	Magnet Ass'y	AK		Q351	VS2SC945AQ/-1 J	2SC945A(Q)		AB
	— Purity and Static				Q402	VS2SC945AQ/-1 J	2SC945A(Q)		AB
	Convergence				Q405	VS2SC945AQ/-1 J	2SC945A(Q)		AB
	PSPA G 0 0 0 4 PEZZ R	Wedge (Gum), Yoke	AC		Q451	VS2SC945AQ/-1 J	2SC945A(Q)		AB
	Positioning (3 Used)				△△Q722	VS2SC945AQ/-1 J	2SC945A(Q)		AB
	QEARC1404PEZZ R	Grounding strap	AD		Q2154	VS2SC945AQ/-1 J	2SC945A(Q)		AB
	MSPRT0001PEFJ R	Spring for CRT	AC		Q2155	VS2SC945AQ/-1 J	2SC945A(Q)		AB
PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)					Q401	VS2SA1015Y/1E J	2SA1015(Y)		AC
PWB-A	DUNTK8605WEV0	- Main P.W.B. UNIT	—		Q403	VS2SA1015Y/1E J	2SA1015(Y)		AC
PWB-B	DUNTK8606WEV0	- CRT P.W.B. UNIT	—		Q601	VS2SC2482//1 J	2SC2482		AD
					△Q602	VS2SD1554//1 E J	2SD1554		AL
					△Q721	VS2SC1983//2 J	2SC1983		AF

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*	Description	Code					
DIODES														
You can substitute for "RH-DX0446CEZZ" for "VHD1SS119//1 and RH-DX0045GEZZ"														
D101	RH-EX0701GEZZ	J	Zener Diode,32V	AB	CF301	RFILC0029TAZZ	J	Sound Take-off	AD					
D102	RH-EX0294CEZZ	J	Zener Diode,5.1V	AA	CF302	RFILC0267CEZZ	J	Sound Take-off	AD					
D401	RH-EX0280CEZZ	J	Zener Diode,3V	AA	CF401	RFILC0013CEZZ	J	4.5MHz	AE					
D451	RH-EX0103CEZZ	J	Zener Diode,5.6V	AB	CF601	RFILA0034CEZZ	J	503kHz	AD					
D453	VHD1SS119//1	J	ISS119	AB	CF2101	RFILC0121GEZZ	J	Filter	AD					
D454	VHD1SS119//1	J	ISS119	AB	SF201	RFILC0137CEZZ	J	Surface Acoustic Wave Filter	AH					
D706	VHD1SS119//1	J	ISS119	AB										
▲D709	VHD1SS119//1	J	ISS119	AB	FILTERS									
D2102	VHD1SS119//1	J	ISS119	AB	CF301	RFILC0029TAZZ	J	Sound Take-off	AD					
D2103	VHD1SS119//1	J	ISS119	AB	CF302	RFILC0267CEZZ	J	Sound Take-off	AD					
D2110	VHD1SS119//1	J	ISS119	AB	CF401	RFILC0013CEZZ	J	4.5MHz	AE					
D455	RH-EX0092CEZZ	J	Zener Diode,3.9V	AB	CF601	RFILA0034CEZZ	J	503kHz	AD					
D501	RH-DX0441CEZZ	J	Diode	AC	CF2101	RFILC0121GEZZ	J	Filter	AD					
	or				SF201	RFILC0137CEZZ	J	Surface Acoustic Wave Filter	AH					
	RH-DX0110CEZZ													
▲D651	RH-DX0441CEZZ	J	Diode	AC	L203	VP-XFR82K0000	J	0.82μH	AB					
	or				L204	VP-XFR68K0000	J	0.68μH	AB					
	RH-DX0110CEZZ				L206	RCILi0588CEZZ	J	IF COIL	AF					
▲D502	RH-DX0131CEZZ	J	Diode	AC	L207	VP-XF100K0000	J	10μH	AB					
▲D751	RH-DX0131CEZZ	J	Diode	AC	L403	VP-XF100K0000	J	10μH	AB					
D602	RH-EX0312CEZZ	J	Zener Diode,9.1V	AA	L301	RCILi0605CEZZ	J	SIF Det	AE					
D605	RH-EX0312CEZZ	J	Zener Diode,9.1V	AA	L401	VP-XF120K0000	J	12μH	AB					
D2112	RH-EX0312CEZZ	J	Zener Diode,9.1V	AA	L402	VP-XF3R3K0000	J	3.3μH	AB					
D653	RH-EX0313CEZZ	J	Zener Diode,9.1V	AA	L404	VP-XF8R2K0000	J	8.2μH	AB					
▲D701	RH-DX0154CEZZ	J	1S1887A	AC	L405	VP-XF8R2K0000	J	8.2μH	AB					
▲D702	RH-DX0154CEZZ	J	1S1887A	AC	L406	VP-XF680K0000	J	68μH	AB					
▲D703	RH-DX0154CEZZ	J	1S1887A	AC	L407	VP-XF680K0000	J	68μH	AB					
▲D704	RH-DX0154CEZZ	J	1S1887A	AC	▲L701	RCILF0254CEZZ	J	Line Filter	AG					
D705	RH-DX0417CEZZ	J	Diode	AE		or								
	or					RCILF0003PEZZ								
	RH-DX0200CEZZ					or								
▲D708	RH-EX0238CEZZ	J	Zener Diode,75V	AC	T601	RTRNZ0073CEZZ	J	H-Drive	AF					
D721	RH-EX0019TAZZ	J	Zener Diode	AB	▲▲T602	RTRNF0057PEZZ	R	H-Output	BH					
▲D752	RH-DX0226CEZZ	J	Diode	AC	▲T701	RTRNP0416CEZZ	J	Power	AV					
▲▲D2701	RH-EX0293CEZZ	J	Zener Diode,5.1V	AA										
PACKAGED CIRCUIT														
▲PR701	RMPTP0026CEZZ	J	Positive Coefficient Thermistor	AF	▲▲R706	RVR-M4328CEZZ	J	1k(B) 120V Adj.	AC					
X801	RCRSB0001PEZZ	R	CRYSTAL,3.58MHz	AL										
CONTROL														

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*	Description	Code
CAPACITORS									
C101	VCEAGA1HW225M	J 2.2	50V	EL. AB	C401	VCKYMN1HB331K	J	330p 50V Ceramic	AA
C301	VCEAGA1HW225M	J 2.2	50V	EL. AB	C402	VCKYMN1HB101K	J	100p 50V Ceramic	AA
C502	VCEAGA1HW225M	J 2.2	50V	EL. AB	C2117	VCKYMN1HB101K	J	100p 50V Ceramic	AA
C516	VCEAGA1HW225M	J 2.2	50V	EL. AB	C2146	VCKYMN1HB101K	J	100p 50V Ceramic	AA
C2007	VCEAGA1HW225M	J 2.2	50V	EL. AB	C403	VCEAGA1HW105M	J	1.0 50V EL.	AC
C102	VCEAGA1CW477M	J 470	16V	EL. AC	C410	VCEAGA1HW105M	J	1.0 50V EL.	AC
C353	VCEAGA1CW477M	J 470	16V	EL. AC	C602	VCEAGA1HW105M	J	1.0 50V EL.	AC
C361	VCEAGA1CW477M	J 470	16V	EL. AC	C603	VCEAGA1HW105M	J	1.0 50V EL.	AC
C724	VCEAGA1CW477M	J 470	16V	EL. AC	C2701	VCEAGA1HW105M	J	1.0 50V EL.	AC
C752	VCEAGA1CW477M	J 470	16V	EL. AC	C404	VCEAGA1HW335M	J	3.3 50V EL.	AB
C103	VCEAGA1VW476M	J 47	35V	EL. AB	C405	VCEAGA1HW335M	J	3.3 50V EL.	AB
C365	VCEAGA1VW476M	J 47	35V	EL. AB	C413	VCEAGA1HW106M	J	10 50V EL.	AC
C721	VCEAGA1VW476M	J 47	35V	EL. AB	C715	VCEAGA1HW106M	J	10 50V EL.	AC
C104	VCKYPA1HF103Z	J 0.01	50V	Ceramic AA	C2704	VCEAGA1HW106M	J	10 50V EL.	AC
C306	VCKYPA1HF103Z	J 0.01	50V	Ceramic AA	C418	VCKYMN1HB151K	J	150p 50V Ceramic	AA
C422	VCKYPA1HF103Z	J 0.01	50V	Ceramic AA	C419	VCCSMN1HL330J	J	33p 50V Ceramic	AA
C2002	VCKYPA1HF103Z	J 0.01	50V	Ceramic AA	C420	VCCSPA1HL820J	J	82p 50V Ceramic	AA
C105	VCSATA1CE226K	J 22	16V	Tantalum,AD	C421	VCCCMN1HH180J	J	18p 50V Ceramic	AA
C201	VCKYMN1HB102K	J	1000p 50V	Ceramic AA	C452	VCQYTA1HM563K	J	0.056 50V Mylar	AB
C205	VCKYMN1HB102K	J	1000p 50V	Ceramic AA	C2003	VCQYTA1HM563K	J	0.056 50V Mylar	AB
C206	VCKYMN1HB102K	J	1000p 50V	Ceramic AA	C2004	VCQYTA1HM563K	J	0.056 50V Mylar	AB
C305	VCKYMN1HB102K	J	1000p 50V	Ceramic AA	C501	VCSATA1CE225K	J	2.2 16V Tantalum	AB
C713	VCKYMN1HB102K	J	1000p 50V	Ceramic AA	C503	VCFYHA1HA274J	J	0.27 50V Mylar	AC
C204	VCKYMN1CY103N	J 0.01	16V	Ceramic AA	C504	VCKYPA2HB391K	J	390p 500V Ceramic	AA
C210	VCKYMN1CY103N	J 0.01	16V	Ceramic AA	C505	VCQYTA1HM473K	J	0.047 50V Mylar	AB
C213	VCKYMN1CY103N	J 0.01	16V	Ceramic AA	C507	VCQYTA1HM103K	J	0.01 50V Mylar	AB
C415	VCKYMN1CY103N	J 0.01	16V	Ceramic AA	C510	VCQYTA1HM103K	J	0.01 50V Mylar	AB
C416	VCKYMN1CY103N	J 0.01	16V	Ceramic AA	▲△C714	VCQYTA1HM103K	J	0.01 50V Mylar	AB
C2005	VCKYMN1CY103N	J 0.01	16V	Ceramic AA	C512	VCEACA1HC335M	J	3.3 50V EL.	AB
C207	VCEAGA1HW474M	J 0.47	50V	EL. AA	C513	VCEAGA1EW477M	J	470 25V EL.	AD
C211	VCEAGA1HW474M	J 0.47	50V	EL. AA	C514	VCEAGA1VW477M	J	470 35V EL.	AD
C802	VCEAGA1HW474M	J 0.47	50V	EL. AA	C710	VCEAGA1VW477M	J	470 35V EL.	AD
C209	VCEAGA1CW227M	J 220	16V	EL. AC	C515	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C214	VCEAGA1CW227M	J 220	16V	EL. AC	C651	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C212	VCKYMN1CX222M	J	2200p 16V	Ceramic AA	C756	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C302	VCQYTA1HM472K	J	4700p 50V	Mylar AB	▲△C605	RC-KZ0340CEZZ	J	820p 2kV Ceramic	AD
C351	VCE9GA1HW225M	J 2.2	50V	EL. (N.P) AB	or				
C352	VCEAGA1VW107M	J 100	35V	EL. AC	RC-KZ0040CEZZ				
C508	VCEAGA1VW107M	J 100	35V	EL. AC	▲△C606	VCFPPD3CA682J	J	6800p 1600V	AE
C2001	VCEAGA1VW107M	J 100	35V	EL. AC	Metalized Polypro Fil m				
C354	VCQYTA1HM104K	J 0.1	50V	Mylar AC	C608	VCFPPD2DB334J	J	0.33 200V	AF
C407	VCQYTA1HM104K	J 0.1	50V	Mylar AC	Metalized Polypro Fil m				
C412	VCQYTA1HM104K	J 0.1	50V	Mylar AC	C609	VCKYPA2HB222K	J	2200p 500V Ceramic	AA
C355	VCEAGA1VW226M	J 22	35V	EL. AA	C611	VCCSPA2HL180K	J	18p 500V Ceramic	AA
C453	VCEAGA1VW226M	J 22	35V	EL. AA	C652	VCEAGA1HW475M	J	4.7 50V EL.	AB
C363	VCQYTA1HM682K	J	6800p 50V	Mylar AB	C2145	VCEAGA1HW475M	J	4.7 50V EL.	AB
C366	VCCSPA1HL330J	J	33p 50V	Ceramic AA					

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*	Description	Code		
▲C701	RC-FZ002SCEZZ	J	0.47	AC125V Plastic AG or RC-QZ005SCEZZ or RC-FZ004SGEZZ	RJ32	VRD-MN2BE000J	J	0	1/8W Carbon	AA	
C702	VCKYPB2HE103P	J	0.01	500V Ceramic	AB	RJ33	VRD-MN2BE000J	J	0	1/8W Carbon	AA
C703	VCKYPB2HE103P	J	0.01	500V Ceramic	AB	RJ35	VRD-MN2BE000J	J	0	1/8W Carbon	AA
C704	VCKYPB2HE103P	J	0.01	500V Ceramic	AB	RJ36	VRD-MN2BE000J	J	0	1/8W Carbon	AA
▲C705	RC-EZ0423CEZZ	J	620	200V EL.	AP	R101	VRD-MN2BE103J	J	10k	1/8W Carbon	AA
	or					▲▲R652	VRD-MN2BE103J	J	10k	1/8W Carbon	AA
	RC-EZ0183CEZZ	J	620	200V EL.		R2008	VRD-MN2BE103J	J	10k	1/8W Carbon	AA
	or					▲▲R2019	VRD-MN2BE103J	J	10k	1/8W Carbon	AA
	RC-EZ0523CEZZ	J	560	200V EL.		R2127	VRD-MN2BE103J	J	10k	1/8W Carbon	AA
▲C712	RC-EZ0378CEZZ	J	100	160V EL.	AG	R2147	VRD-MN2BE103J	J	10k	1/8W Carbon	AA
C717	VCQPSB2DA473K	J	0.047	200V Polypro	AB	R102	VRD-MN2BE1R0J	J	1.0	1/8W Carbon	AA
C718	VCKYPA2HB151K	J	150p	500V Ceramic	AA	▲R103	VRS-VV3DB151J	J	150	2W Metal Oxide	AA
C719	VCKYPA2HB332K	J	3300p	500V Ceramic	AB	▲R104	VRS-VV3DB153J	J	15k	2W Metal Oxide	AA
C725	VCKYPA2HB152K	J	1500p	500V Ceramic	AA	R105	VRD-MN2BE823J	J	82k	1/8W Carbon	AA
C751	VCEAGA2EW106M	J	10	250V EL.	AC	R2003	VRD-MN2BE823J	J	82k	1/8W Carbon	AA
C754	VCEAGA1CW337M	J	330	16V EL.	AC	R2142	VRD-MN2BE823J	J	82k	1/8W Carbon	AA
C801	VCQYTA1HM223J	J	0.022	50V Mylar	AA	R106	VRD-RA2BE121J	J	120	1/8W Carbon	AA
C803	VCCCMN1HH120J	J	12p	50V Ceramic	AA	R107	VRD-RA2BE121J	J	120	1/8W Carbon	AA
C805	VCEAGA1HW104M	J	0.1	50V EL.	AA	R207	VRD-RA2BE121J	J	120	1/8W Carbon	AA
C806	VCEAGA1HW104M	J	0.1	50V EL.	AA	R901	VRD-RA2BE121J	J	120	1/8W Carbon	AA
C807	VCEAGA1HW104M	J	0.1	50V EL.	AA	R902	VRD-RA2BE121J	J	120	1/8W Carbon	AA
C2109	VCKYMN1HB471K	J	470p	50V Ceramic	AA	R201	VRD-MN2BE151J	J	150	1/8W Carbon	AA
C2110	VCKYMN1HB471K	J	470p	50V Ceramic	AA	R202	VRD-MN2BE122J	J	1.2k	1/8W Carbon	AA
C2111	VCKYMN1HB471K	J	470p	50V Ceramic	AA	R417	VRD-MN2BE122J	J	1.2k	1/8W Carbon	AA
C2112	VCKYMN1HB471K	J	470p	50V Ceramic	AA	R203	VRD-MN2BE682J	J	6.8k	1/8W Carbon	AA
RESISTORS											
RJ2	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R423	VRD-MN2BE682J	J	6.8k	1/8W Carbon	AA
RJ6	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R462	VRD-MN2BE682J	J	6.8k	1/8W Carbon	AA
RJ8	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R204	VRD-MN2BE470J	J	47	1/8W Carbon	AA
RJ9	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R206	VRD-MN2BE152J	J	1.5k	1/8W Carbon	AA
RJ14	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R418	VRD-MN2BE152J	J	1.5k	1/8W Carbon	AA
RJ15	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R453	VRD-MN2BE152J	J	1.5k	1/8W Carbon	AA
RJ16	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R208	VRD-MN2BE471J	J	470	1/8W Carbon	AA
RJ20	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R409	VRD-MN2BE471J	J	470	1/8W Carbon	AA
RJ22	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R504	VRD-MN2BE471J	J	470	1/8W Carbon	AA
RJ25	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R209	VRD-MN2BE331J	J	330	1/8W Carbon	AA
RJ26	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R401	VRD-MN2BE331J	J	330	1/8W Carbon	AA
RJ27	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R609	VRD-MN2BE331J	J	330	1/8W Carbon	AA
RJ28	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R2146	VRD-MN2BE331J	J	330	1/8W Carbon	AA
RJ30	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R303	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
RJ31	VRD-MN2BE000J	J	0	1/8W Carbon	AA	R407	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R408	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R416	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R2006	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R2007	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R2112	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R2113	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R2116	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA
						R2125	VRD-MN2BE102J	J	1.0k	1/8W Carbon	AA

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*	Description	Code
R2132	VRD-MN2BE102J	J	1.0k 1/8W Carbon	AA	R2703	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R2133	VRD-MN2BE102J	J	1.0k 1/8W Carbon	AA	R506	VRD-RA2BE683G	J	68k 1/8W Carbon	AA
R2135	VRD-MN2BE102J	J	1.0k 1/8W Carbon	AA	R507	VRD-RA2BE104G	J	100k 1/8W Carbon	AA
▲R2150	VRD-MN2BE102J	J	1.0k 1/8W Carbon	AA	R508	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R2152	VRD-MN2BE102J	J	1.0k 1/8W Carbon	AA	R2004	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R2201	VRD-MN2BE102J	J	1.0k 1/8W Carbon	AA	R2128	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R2202	VRD-MN2BE102J	J	1.0k 1/8W Carbon	AA	R511	VRD-RM2HD681J	J	680 1/2W Carbon	AA
R310	VRD-MN2BE153J	J	15k 1/8W Carbon	AA	R712	VRD-RM2HD681J	J	680 1/2W Carbon	AA
R351	VRD-MN2BE821J	J	820 1/8W Carbon	AA	R514	VRD-RM2HD1R5J	J	1.5 1/2W Carbon	AA
R352	VRD-MN2BE4R7J	J	4.7 1/8W Carbon	AA	▲R515	VRN-SV2HB1R0J	J	1.0 1/2W Metal Film	AA
R355	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA	R516	VRD-RA2BE223G	J	22k 1/8W Carbon	AA
R357	VRD-RA2BE333J	J	33k 1/8W Carbon	AA	R517	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
R703	VRD-RA2BE333J	J	33k 1/8W Carbon	AA	▲R707	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
R358	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA	R518	VRD-RA2BE123G	J	12k 1/8W Carbon	AA
R603	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA	R521	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R402	VRD-MN2BE391J	J	390 1/8W Carbon	AA	R524	VRD-MN2BE332J	J	3.3k 1/8W Carbon	AA
R604	VRD-MN2BE391J	J	390 1/8W Carbon	AA	R801	VRD-MN2BE332J	J	3.3k 1/8W Carbon	AA
R404	VRD-MN2BE330J	J	33 1/8W Carbon	AA	R2130	VRD-MN2BE332J	J	3.3k 1/8W Carbon	AA
R406	VRD-RA2BE680J	J	68 1/8W Carbon	AA	R525	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R410	VRD-MN2BE562J	J	5.6k 1/8W Carbon	AA	R607	VRD-RM2HD101J	J	100 1/2W Carbon	AA
R438	VRD-MN2BE562J	J	5.6k 1/8W Carbon	AA	R608	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R459	VRD-MN2BE562J	J	5.6k 1/8W Carbon	AA	R610	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
▲R727	VRD-MN2BE562J	J	5.6k 1/8W Carbon	AA	▲R611	VRS-SV3LB152J	J	1.5k 3.0W Metal Oxide	AB
R411	VRD-MN2BE563J	J	56k 1/8W Carbon	AA	▲R612	VRN-VV3ABR22J	J	0.22 1W Metal Film	AA
R412	VRD-RA2BE391J	J	390 1/8W Carbon	AA	▲R651	VRD-RM2HD1R0J	J	1.0 1/2W Carbon	AA
R413	VRD-MN2BE820J	J	82 1/8W Carbon	AA	▲R655	VRS-VV3AB682J	J	6.8k 1W Metal Oxide	AA
R414	VRD-MN2BE820J	J	82 1/8W Carbon	AA	▲R701	VRD-RM2HD824J	J	820k 1/2W Carbon	AA
R415	VRD-MN2BE820J	J	82 1/8W Carbon	AA	▲R702	VRW-KQ3HC1R5K	J	1.5 5W Cement	AE
R419	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA	R704	VRD-RM2HD273J	J	27k 1/2W Carbon	AA
R439	VRD-MN2BE333J	J	33k 1/8W Carbon	AA	▲R705	VRD-RA2EE104G	J	100k 1/4W Carbon	AA
R2143	VRD-MN2BE333J	J	33k 1/8W Carbon	AA	▲R708	VRD-RA2EE562G	J	5.6k 1/4W Carbon	AA
R2701	VRD-MN2BE333J	J	33k 1/8W Carbon	AA	R709	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R440	VRD-RA2BE821J	J	820 1/8W Carbon	AA	R2002	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R657	VRD-RA2BE821J	J	820 1/8W Carbon	AA	R2140	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R441	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA	R2141	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R451	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA	R710	VRD-RA2EE123J	J	12k 1/4W Carbon	AA
R605	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA	R711	VRS-SV2HC470J	J	47 1/2W Metal Oxide	AA
▲R452	VRC-MA2HG562K	J	5.6k 1/2W Solid	AA	▲R713	VRD-RM2HD330J	J	33 1/2W Carbon	AA
▲R454	VRS-SV2HC103J	J	10k 1/2W Metal Oxide	AA	▲R715	VRS-SV2HC151J	J	150 1/2W Metal Oxide	AA
R455	VRD-RA2BE274J	J	270k 1/8W Carbon	AA	▲R716	VRW-KQ3HC331K	J	330 5W Cement	AE
R456	VRD-RA2BE274J	J	270k 1/8W Carbon	AA	▲R717	VRW-KQ4AC6R8K	J	6.8 10W Cement	AF
R457	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA	R721	VRD-RM2HD331J	J	330 1/2W Carbon	AA
R501	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA	▲R729	VRS-VV3DB220J	J	22 2W Metal Oxide	AA
R505	VRD-MN2BE101J	J	100 1/8W Carbon	AA	▲R751	VRS-VV3AB390J	J	39 1W Metal Oxide	AA
R2009	VRD-MN2BE101J	J	100 1/8W Carbon	AA	▲R752	VRN-VV3AB1R8J	J	1.8 1W Metal Film	AA
R2011	VRD-MN2BE101J	J	100 1/8W Carbon	AA	▲R754	VRN-RV3AB1R0J	J	1.0 1W Metal Film	AB
R2702	VRD-MN2BE101J	J	100 1/8W Carbon	AA	▲R755	VRS-VV3AB470J	J	47 1W Metal Oxide	AA
					R2001	VRD-MN2BE683J	J	68k 1/8W Carbon	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R2005	VRD-MN2BE183J	J	18k 1/8W Carbon	AA	▲△RY701	RRLYU0022CEZZ	J	Relay,Power or RRLYU0031CEZZ	AH
R2149	VRD-MN2BE183J	J	18k 1/8W Carbon	AA	S2001	QSW-K0079GEZZ	J	Switch,Power	AB
R2012	VRD-MN2BE272J	J	2.7k 1/8W Carbon	AA	S2002	QSW-K0079GEZZ	J	Switch,CH-up	AB
R2013	VRD-RA2BE182J	J	1.8k 1/8W Carbon	AA	S2003	QSW-K0079GEZZ	J	Switch,CH-down	AB
R2014	VRD-MN2BE182J	J	1.8k 1/8W Carbon	AA	S2004	QSW-K0079GEZZ	J	Switch,VOL-up	AB
R2015	VRD-MN2BE182J	J	1.8k 1/8W Carbon	AA	S2005	QSW-K0079GEZZ	J	Switch,VOL-down	AB
R2018	VRD-RA2BE183J	J	18k 1/8W Carbon	AA	▲△RUNTK0476CEZZ	J	Antenna Box Unit	AS	
R2153	VRD-RA2BE183J	J	18k 1/8W Carbon	AA	<hr/>				
R2111	VRD-RM2HD223J	J	22k 1/2W Carbon	AA	PWB-B DUNTK8606WEV0				
R2129	VRD-RM2HD223J	J	22k 1/2W Carbon	AA	CRT UNIT				
R2115	VRD-MN2BE224J	J	220k 1/8W Carbon	AA	<hr/>				
R2118	VRD-RA2BE153J	J	15k 1/8W Carbon	AA	TRANSISTORS				
R2119	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA	Q852	VS2SC2229O/1E	J	2SC2229(O)	AD
R2120	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA	Q854	VS2SC2229O/1E	J	2SC2229(O)	AD
R2121	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA	Q856	VS2SC2229O/1E	J	2SC2229(O)	AD
R2122	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA	Q881	VS2SA1015Y/1E	J	2SA1015(Y)	AC
▲△R2131	VRN-RA2BK223F	J	22k 1/8W Metal Film	AB	<hr/>				
▲△R2137	VRN-RA2BK473F	J	47k 1/8W Metal Film	AA	DIODES				
▲△R2139	VRN-RA2BK823F	J	82k 1/8W Metal Film	AA	You can substitute for "RH-DX0446CEZZ" for "VHD1SS119//1				
R2154	VRD-RA2BE123J	J	12k 1/8W Carbon	AA	▲△VHD1SS119CEZZ				
R2155	VRD-RA2BE103J	J	10k 1/8W Carbon	AA					
R2156	VRD-RA2BE103J	J	10k 1/8W Carbon	AA					
▲△R2704	VRS-VV3AB331J	J	330 1W Metal Oxide	AA					

MISCELLANEOUS PARTS

FB602	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB603	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB701	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB702	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB703	RBLN-0020CEZZ	J	Ferrite Bead	AB
FH701	QFSHD1013CEZZ	J	Fuse Holder	AC

QESHD1009CEZ7

FH702 QFSHD1014CEZZJ Fuse Holder

QESHD1010CEZ7

\F701 QFS-B4023CEZZ J Euse.4A

or

QFS-B4021GEZZ

QPLGN0241CE04

P351 QPLGN0241CEZZ J Plug,2pin

QPLGN0505CEZZ

P701 QPLGN0207CEZZ J Plug,2pin

QPLGN0441CEZ2 J Plug, 4pin

PP1001 QFEGN0341CE2Z J Plug,3pin

BRMCL0316CEZ3 | Remote

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**PWB-B DUNTK8606WEV0
CRT UNIT**

TRANSISTORS

Q852	VS2SC2229O/1E	J	2SC2229(O)	AD
Q854	VS2SC2229O/1E	J	2SC2229(O)	AD
Q856	VS2SC2229O/1E	J	2SC2229(O)	AD
Q881	VS2SA1015Y/1E	J	2SA1015(Y)	AC

DIODES

You can substitute for "RH-DX0446CEZZ" for "VHD1SS119//--1
and RH-DX0045GEZZ"

D881 VHD1SS119//-1 J 1SS119 AB
D882 VHD1SS119//-1 J 1SS119 AB
D885 VHD1SS119//-1 J 1SS119 AB

com

L851 VP-DF151K0000 J 150 μ H AB

CAPACITORS

C851	VCKYPA1HB271K	J	270p	50V	Ceramic	AA
C852	VCKYPA1HB271K	J	270p	50V	Ceramic	AA
C853	VCKYPA1HB271K	J	270p	50V	Ceramic	AA
C854	RC-KZ0016CEZZ	J	0.01	1.4kV	Ceramic	AC
C858	VCKYPA1HB102K	J	1000p	50V	Ceramic	AA
C883	VCEAGA1VW336M	J	33	35V	EL.	
C881	VCEAGA1HW106M	J	10	50V	EL	

RESISTORS

R851	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R859	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R867	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R852	VRD-RA2BE271J	J	270	1/8W	Carbon	AA

Ref. No.	Part No.	*	Description	Code
R860	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R868	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R853	VRD-RA2BE121J	J	120 1/8W Carbon	AA
R861	VRD-RA2BE121J	J	120 1/8W Carbon	AA
R869	VRD-RA2BE121J	J	120 1/8W Carbon	AA
R857	VRS-VV3AB123J	J	12k 1W Metal Oxide	AA
R865	VRS-VV3AB123J	J	12k 1W Metal Oxide	AA
R873	VRS-VV3AB123J	J	12k 1W Metal Oxide	AA
R858	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R866	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R874	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R881	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R882	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R883	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R884	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA

MISCELLANEOUS PARTS

P851	QPLGN0541CEZZ	J	Plug	AB
P852	QPLGN0441CEZZ	J	Plug	AB
SC851	QSOCV0829CEZZ	J	Socket,CRT	AK

MISCELLANEOUS PARTS

①	QACCD3014CESA	J	AC Cord	AH
②	QCNW-1495PEZZ	R	Connecting Cord	AE
③	QCNW-1768PEZZ	R	Connecting Cord	AF
④	QCNW-1769PEZZ	R	Connecting Cord	AG
⑤	RUNTK0393CEZZ	J	Antenna Adaptor	AH
⑥	VSP0080P-H28A	J	Speaker	AM

**PACKING PARTS
(NOT REPLACEMENT ITEM)**

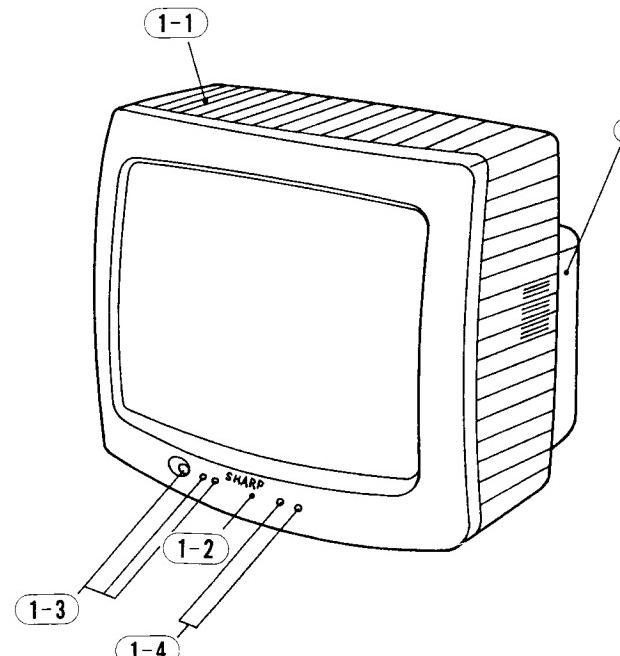
SPA KC5957PEZZ	R	Packing Case	—
SPA KP0031PEZZ	R	Wrapping Paper	—
SPA KX2527PEZZ	R	Polystyrene Mat	—

CABINET PARTS

1	CCABA2276WEV0	R	Cabinet Comrete Ass'yBA	
1-1	-	R	Cabinet Front	—
1-2	GCOVA0053PEKA	R	Cover,R/C	AE
1-3	JBTN-0167PEKA	R	Button,Power,VOL-up/down	AG
1-4	JBTN-0168PEKA	R	Button,CH-up/down	AF
2	GCABB2238PEKA	R	Rear Cabinet	AY

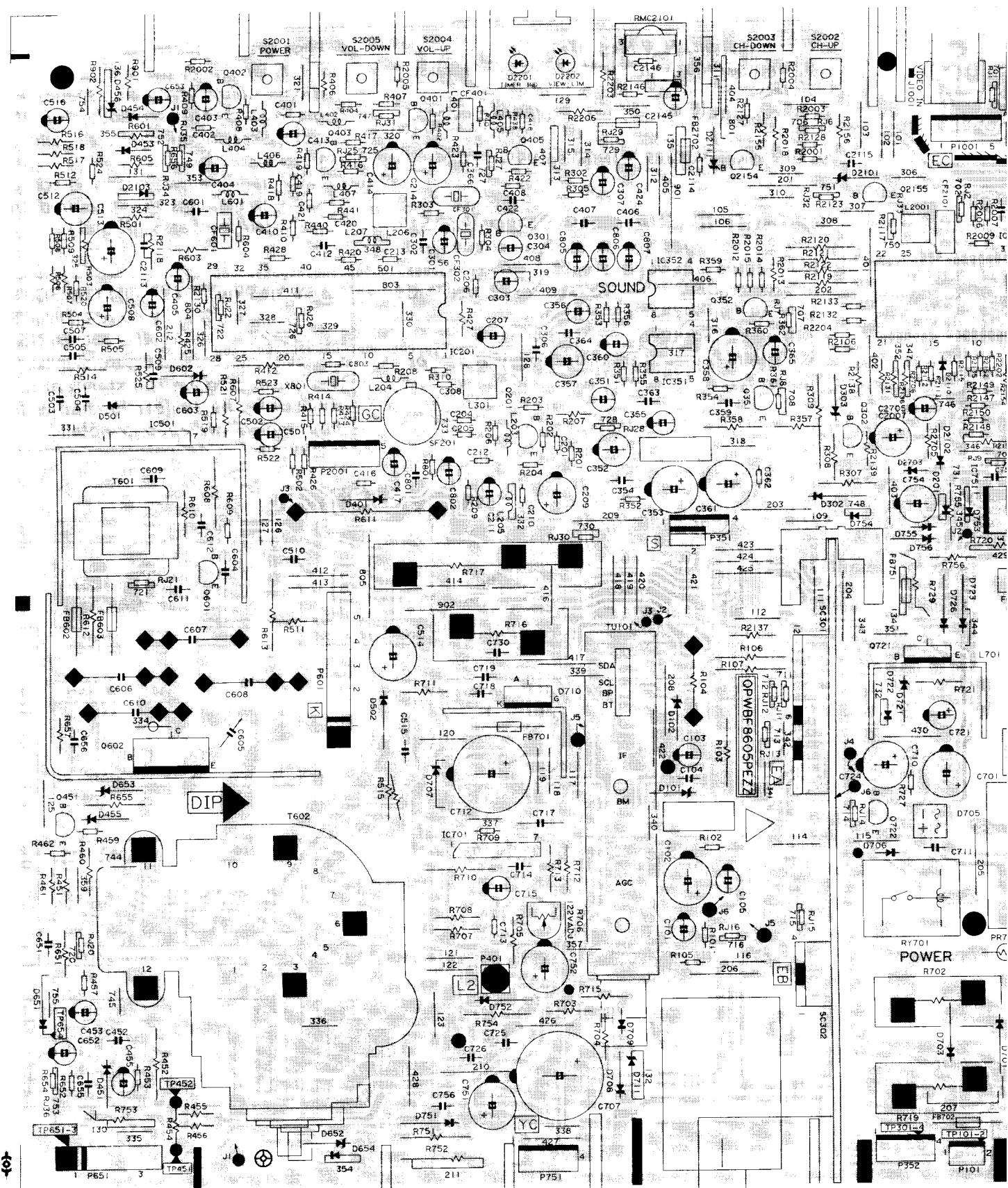
SUPPLIED ACCESSORIES

QANTR0018PEZZ	R	Rod Antenna	AQ
RRMCG1124CESA	J	Infrared R-C	AW
		-BATTERY	-
TGAN-0018PEZZ	R	Guarantee Card	AD
TINS-5536PEZZ	R	Operation Manual	
SSAKA0001PEZZ	R	Polystyrene Bag	AA

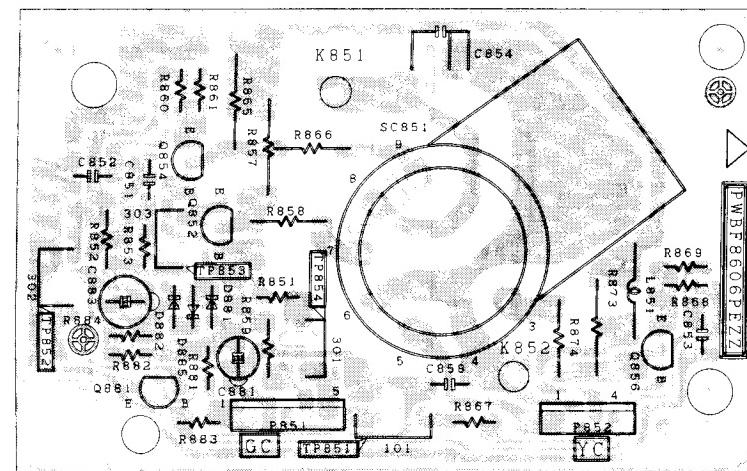
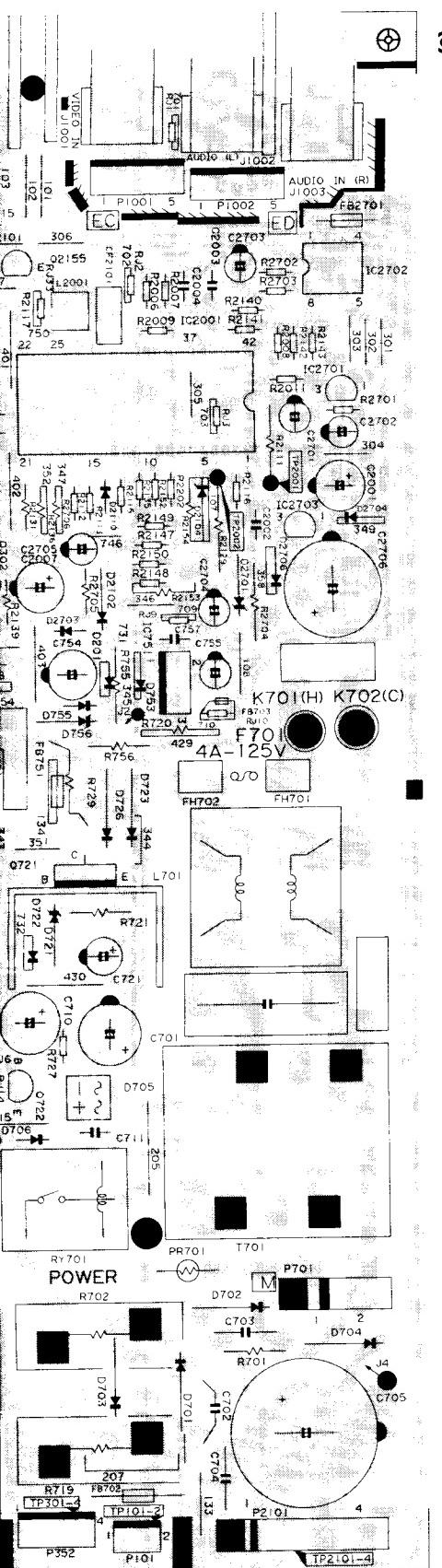
CABINET PARTS LOCATION

PRINTED WIRING BOARD ASSEMBLIES

(All the PWB's here are shown as viewed from their wiring sides.)

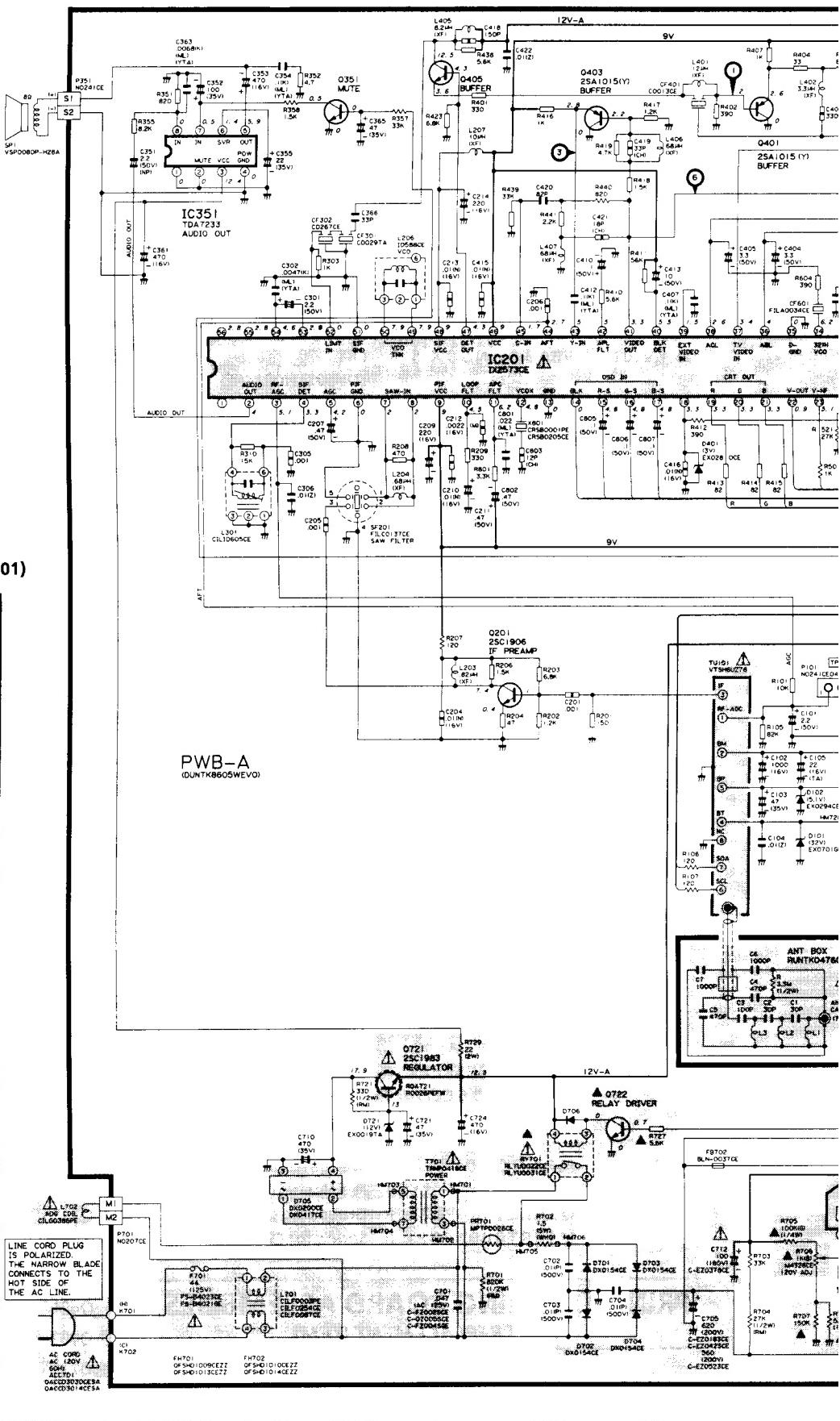


PWB-A



PWB-E

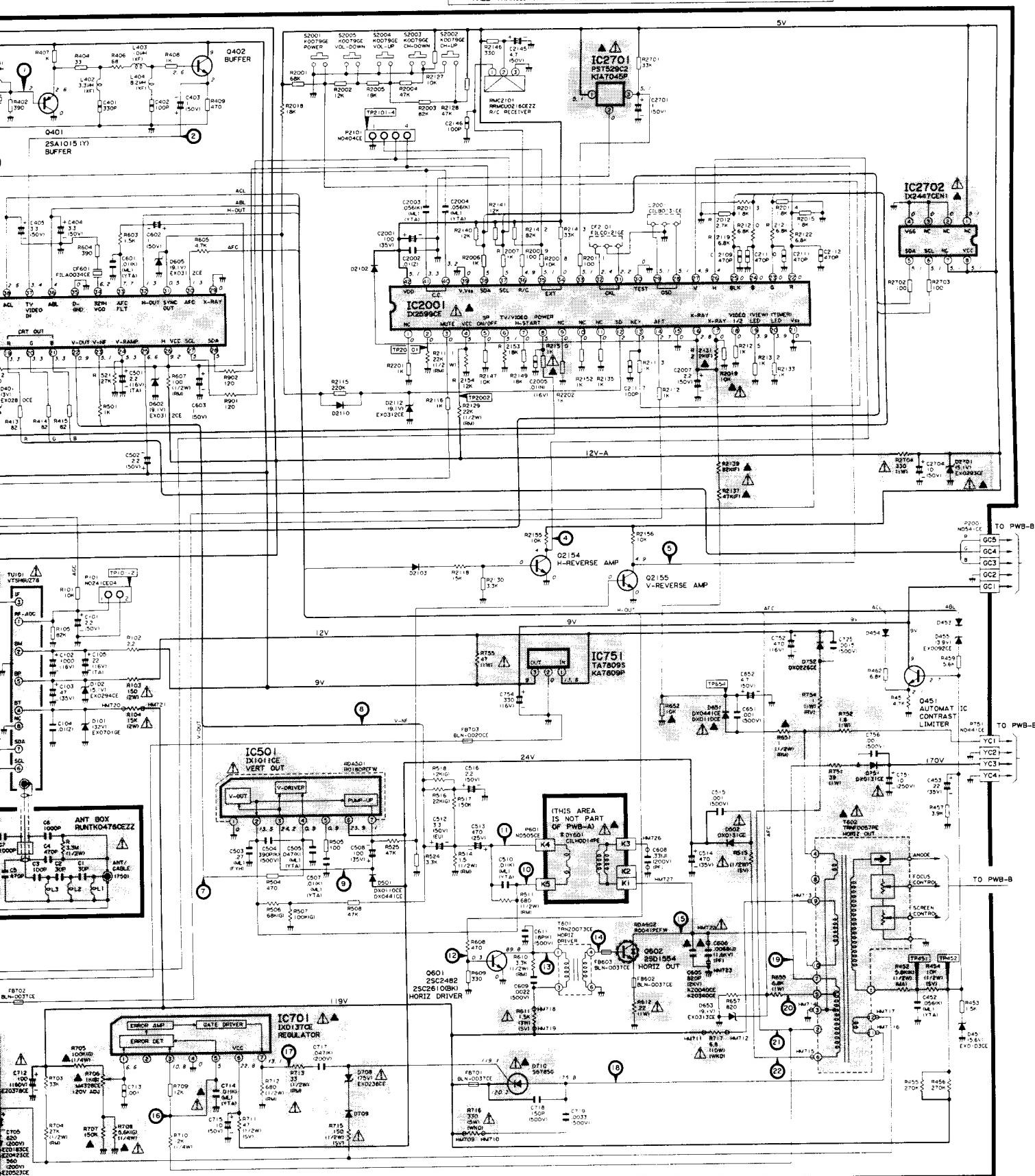
SCHEMATIC DIAGRAM: MAIN



INDICATION OF SENSOR IC VOLTAGE (IC2001)

Pin No.	IC2001 Logic or Voltage Levels
3	H-Mute on L-Mute off
6	H-TV L-Video
8	H-Power on L-Power off
12	Station Detector (H-Pulse in)
13	Negative Pulse
14	AFT Voltage Input
16	X-RAY Protector
19	View Timer L-LED on
19	View Timer L-LED on
20	On time L-LED on
22	Pulse (Active High)
23	Pulse (Active High)
24	Pulse (Active High)
25	Pulse (Active High)
26	Negative Pulse(H-Sync)
27	Negative Pulse(V-Sync)
28	OSD 12.08MHz
29	OSD 12.08MHz
31	OSC Input (8MHz)
32	OSC Output (8MHz)
33	Reset (Active High)
36	Negative Pulse
37	Serial Clock
38	Serial Clock
40	Caption Control (Composite Video)
41	Caption Control (Composite Video)

NOTE: ALL DIODES ARE "1SS119" "DX0045GE" OR "DX0446CE" UNLESS OTHERWISE SPECIFIED.
ALL TRANSISTORS ARE "2SC945A(O)" OR "2SC1815(Y)" UNLESS OTHERWISE SPECIFIED.



DESCRIPTION OF SCHEMATIC DIAGRAM

NOTE:

1. The unit of resistance "ohm" is omitted (K:1000 ohms, M:1 Meg ohm).
 2. All resistors are 1/8 watt, unless otherwise noted.
 3. All capacitors are μF , unless otherwise noted P: $\mu\mu F$.
 4. (G) indicates $\pm 2\%$ tolerance may be used.

VOLTAGE MEASUREMENT CONDITIONS:

1. All DC voltages are measured with VTVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.
 2. All voltages measured with $1000\mu V$ B & W or Color signal.

WAVEFORM MEASUREMENT CONDITIONS:

1. **Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.**
 2.  indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)

**▲ AND SHADED () COMPONENTS
= SAFETY RELATED PARTS.
▲ MARK = X-RAY RELATED PARTS.**

This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

WAVEFORMS

